

REMARKS

The applicants thank the Examiner for careful consideration of the application.

Applicants's representative contacted Examiner on January 24, 2003 in regards to application being placed on final action in view of Yong (U.S. 6088021) and Kawabe (U.S. 6166722). Applicants's representative pointed out that neither Kawabe nor Yong teach, that part of the tracking device is on the rotatable cable receiver. Examiner agreed and withdrew the final rejection.

Applicants have added new claims 35-37 to better clarify and reflect the nature of the invention disclosed.

Claims 1-4, 9-14, 16, 18-20, and 24-34 are pending in the application. Claims 1-4, 9-14, 16, 18-20, and 24-34 were rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over Kawabe et al. in view of Yong and Moore et al.. No claims have been allowed by the Examiner

REJECTIONS UNDER 35 U.S.C. §103(?)

Examiner has rejected claims 1-4, 9-14, 16, 18-20, and 24-34, under 35 U.S.C. § 103(a) as being unpatentable over Kawabe et al. (U.S. 6,166,722, "Kawabe ") in view of Yong (U.S. 6,088,0221, "Yong") and Moore et al. (U.S. 6,020,875, "Moore"). This rejection is respectfully traversed with regard to claims 1-4, 9-14, 16, 18-20, and 24-34 since neither of the cited references, taken either individually, or in combination therewith, teach, suggest, or mention the claimed invention.

To establish a prima facie case of obviousness, the prior art must suggest the desirability of the claimed invention; a reasonable expectation of success is required; and all claim limitations must be taught or suggested by the prior art. (MPEP §2143). These requirements are not met here.

In regards to independent claims 1 and 24, Examiner correctly states neither Kawabe nor Yong disclose, teach, or suggest, and Moore also does not disclose, teach, or suggest,

"a single spool *cable receiver rotatably mounted to the housing*; a cable . . . mounted to the cable receiver; and a *tracking device having at least one component of the tracking device disposed on or within the cable receiver*, wherein the *tracking device generates signals based on movement of the pointing device*, wherein the pointing device has a first mode with a *first portion of the cable having a first length external to the pointing device* and a second portion of the cable wound around the cable receiver; and a second mode with the first portion of the cable having a second length external to the pointing device less than the first length,"

as it is disclosed, defined, and claimed in independent claims 1 and 24 by the Applicants in the instant specification. *Emphasis added.*

Kawabe discloses, "[t]he pointing device 40 is electrically connected to the apparatus main body 44 by means of a cable 52 having a predetermined length." Col. 6, lines 35-37. Kawabe further discloses, "[t]he cable 52 is preferably wound in the apparatus main body 44 by means of a cable winding device (not shown) when the pointing device 40 is stored in the storage section 46." Col. 6, lines 50-53. Thus, Kawabe teaches a computer having a cable-winding device and a pointing device electrically connected to the computer via a cable.

Yong teaches, "[t]he body 300 may include a reel assembly 314 capable of alternately extending and retracting the cord 316 between a fully extended length and a fully retracted length (see FIG. 2). The reel assembly 314 preferably comprises a frame or housing 318 disposed within housing 302 of the body 300." Col. 5, lines 57-61. Yong also teaches, "[a] rotatable ball 310 may extend from the bottom surface 306 for contacting a work surface . . . whereupon movement of the body 300 across the work surface induces rotation

of the ball 310. Electronic encoders (not shown) sense rotation of the ball 310, and generate a signal indicative of the ball's rotation to control movement of a cursor in the display area of the computer's display." Thus, Yong teaches a tracking device (i.e. the ball 310 and encoders (not shown)) disposed within body 300 of the pointing device and a reel assembly 314 having a frame or housing 318 separating reel assembly 314 from the tracking device (see Figs. 3a and 3b).

First, Moore does not disclose, teach, or suggest " a cable having a first end and a second end with the *second end mounted to the cable receiver . . .* wherein the pointing device has a first mode with a first portion of the cable *having a first length external to the pointing device* and a second portion of the cable wound around the cable receiver; and a second mode with the first portion of the cable having a second length external to the pointing device less than the first length," as it is disclosed, defined, and claimed in independent claims 1 and 24 by the Applicants in the instant specification. *Emphasis added.* Moore teaches, a high fidelity mechanical transmission system connected to a computer, wherein "[t]he user manipulates wheel 12 and the position of the wheel in its degree of freedom is read by a position sensor of the interface 16." Col. 5, lines 47-50. Moore, also, teaches, "cable 50 is tied to the first drum 38 at a position 54, and the other end of cable 50 is tied to the first drum 38 at position 56." Col 9, lines 13-15 (emphasis added). Thus, Moore teaches a mechanical transmission system utilizing a cable and drum, wherein both ends of the cable are attached to the drum and does not disclose, teach, or suggest, a cable having a first end and a second end with the second end mounted to the cable receiver and the first end having a first length external to the pointing device. Moore is silent on both a cable receiver and an electrical cable mounted to the cable receiver. Applicants respectfully disagree with Examiner's statement that "Moore . . . teaches an interface device (10) *including a cable (50) wrapped around a pulley, and sensor (28)* which can be an optical sensor intended to measure the rotation of the wheel." Cable 50, in Moore, provides a means to rotate drum 38 and pulley 36; but the cable, drum and pulley have no electrical function, as the cable and cable receiver have in the instant

specification. The cable 50, drum 38, and pulley 36, in Moore does not teach or suggest an electrical cable mounted to a rotatable cable receiver as it is disclosed, defined, and claimed in the instant specification. Moore provides neither a motivation nor does Moore provide any reasonable expectation of success since aggregating together various parts using Applicants' instant specification as a template does not establish a prima facie case of obviousness. Thus, the Examiner's suggested combination of Kawabe, Yong, and Moore does not teach the present invention as recited in independent claims 1 and 24, and thus does not suggest the desirability of the claimed invention; nor that all claim limitations must be taught or suggested by the prior art sufficient to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection has been overcome. The applicants therefore respectfully request that the rejection under 35 U.S.C. §103(a) for independent claims 1 and 24 be withdrawn.

In addition Moore, further, teaches in regards to the position sensor 28 shown in Figs. 2, 3 and 5

"[a] sensor is provided to sense the rotation of the steering wheel 12 and report an electrical signal to the electronic portion 30 of the steering wheel device 10. Sensor 28 . . . is coupled to a rotating shaft of the second capstan drum, which is coupled to and rotates in accordance with the steering wheel 12. In alternate embodiments, the sensor 28 can be positioned at other rotating positions of the interface device. For example, sensor 28 can be provided on the rotating shaft of first capstan drum 36."

Col. 7, line 63 to Col. 8 line. Assuming for the moment that the drums and pulleys shown and described in Moore are analogous to the cable receiver disclosed, defined, and claimed in the instant specification Applicants would like to direct Examiner's attention to Figs. 4a-4d in Moore. These figures show a number of views of capstan drive mechanism 26 none of which show, nor do Applicants find any teaching or suggestion within the specification or in the figures, that sensor 28 is disposed on or within either capstan drum 38 or 42 which has cable 50 and 58 respectively attached

thereto. Thus, Moore teaches a mechanical transmission system utilizing a sensor attached to a shaft that senses the rotation of the shaft that has a drum/pulley mechanism coupled to the shaft. Moore does not disclose, teach, or suggest a sensor disposed on or within a drum or rotating platform (i.e. a cable receiver). Thus, Moore does not disclose, teach, or suggest, "a cable . . . mounted to the cable receiver; and a *tracking device having at least one component of the tracking device disposed on or within the cable receiver* as it is disclosed, defined, and claimed by Applicants in the instant specification in independent claims 1 and 24. *Emphasis added.* Thus, the Examiner's suggested combination of Kawabe, Yong, and Moore does not teach the present invention as recited in independent claims 1 and 24, and thus does not meet the requirement that all claim limitations must be taught or suggested by the prior art to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection has been overcome. The applicants therefore respectfully request that the rejection under 35 U.S.C. §103(a) for independent claims 1 and 24 be withdrawn.

Further, Moore does not disclose, teach, or suggest a "tracking device [that] generates signals based on movement of the pointing device," as it is disclosed, defined, and claimed in independent claims 1 and 24 by the Applicants in the instant specification. *Emphasis added.* Moore teaches, "[b]ase 14 [of interface device 10] supports the steering wheel 12 on a grounded surface, such as a table top, desk surface, floor, etc." Col. 5, lines 12-13. Moore is silent on movement of interface device 10 over a surface. Further, the interface device disclosed and taught in Moore is silent on any components that generate signals based on movement of the interface device over a surface, as compared to independent claims 1 and 24 that claim a "tracking device [that] generates signals based on movement of the pointing device," as it is disclosed, defined, and claimed in independent claims 1 and 24. *Emphasis added.* Moore teaches and interface device having a steering wheel coupled to a mechanical transmission system utilizing a sensor attached to a shaft that senses the

rotation of the shaft that has a drum/pulley mechanism coupled to the shaft. Although the prior art can be modified to reject claims as prima facie obvious as long as there is a reasonable expectation of success. MPEP 2143.02 (*citing In re Merck & Co. Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986)). Thus, there is no reasonable expectation of success "to provide Moore's rotary sensor onto Kawabe's pointing device as stated by Examiner.

As noted above Moore does not teach or suggest a cable receiver, does not teach or suggest an electrical cable mounted to the cable receiver, does not teach or suggest a tracking device generating signals based on movement of the pointing device, and does not teach or suggest at least one component of the tracking device disposed on or within the cable receiver. All words in a claim must be considered in judging the patentability of that claim against the prior art. MPEP 2143.03, (*citing In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)). Thus, the combination of Kawabe, Yong, and Moore does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection has been overcome. The applicants therefore respectfully request that the rejection under 35 U.S.C. §103(a) for independent claims 1 and 24 be withdrawn.

In regards to independent claim 25, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest, "an optical tracking device having at least one optical component disposed within the cable receiver, the optical tracking device including a sensor, a lens, and a light source, wherein the tracking device generates signals based on movement of the pointing device," as it is disclosed, defined, and claimed in independent claim 25 by the Applicants in the instant specification. *Emphasis added*. As noted above Kawabe teaches a computer having a cable-winding device and a pointing device electrically connected to the computer via a cable. As noted above Yong teaches a tracking device (i.e. the ball 310 and encoders (not shown)) disposed within body 300 of the pointing device and a reel assembly

314 having a frame or housing 318 separating reel assembly 314 from the tracking device. As noted above Moore teaches a mechanical transmission system having a base with an electronic interface fixed to the base and a position sensor that reads the position of the rotatable wheel using a conventional rotary sensor that senses the rotation of a shaft relative to a fixed base having one or more components on the fixed base. Moore teaches using a photodiode and photodetector to detect rotation, and Moore teaches a steering wheel device that has one component moving (i.e. the wheel) and another component stationary with respect to the moving component. Moore does not disclose, teach, or suggest an optical tracking device having at least one optical component disposed within the cable receiver," as it is disclosed, defined, and claimed in independent claim 25 by the Applicants in the instant specification. *Emphasis added.* Nor does Moore teach, "the optical tracking device *including a sensor, a lens, and a light source*, wherein the tracking device generates signals based on movement of the pointing device," as it is disclosed, defined, and claimed in independent claim 25 by the Applicants in the instant specification. *Emphasis added.* Moore teaches a rotary sensor utilizing a light source and detector but is silent on an optical tracking device that generates signals based on movement of the pointing device. Further, Moore suggests utilization of a fiber to sense rotation of a shaft but is silent on both an optical tracking device and an optical tracking device including a sensor, a lens, and a light source to generate signals based on movement of the pointing device. The suggest to utilize an optical fiber to sense rotation does not teach, suggest or disclose an optical tracking device to track movement in two dimensions.

The components found in an optomechanical tracking device namely an LED and photodetector utilized to sense movement of a rubber ball does not disclose, teach, or suggest an optical tracking device, that includes no moving parts as disclosed, defined and claimed in the instant specification. Since Kawabe, Yong, and Moore are all silent on an optical tracking device, the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in

independent claim 25, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection has been overcome. The cited prior art does not suggest the desirability of the claimed invention; a reasonable expectation of success in adapting the prior art to function in the manner of the present invention is absent; and all the claim limitations are not taught nor suggested by the prior art. The applicants therefore respectfully request that the rejection under 35 U.S.C. §103(a) for independent claim 25 be withdrawn.

In regards to independent claim 26, none of the cited references Kawabe, Yong, or Moore disclose, teach, or suggest, "a rotatable control circuit having at least one transducer disposed on the cable receiver converting movement of the mechanical motion transfer mechanism into position signals in response to movement of the housing," as it is disclosed, defined, and claimed in independent claim 26 by the Applicants in the instant specification. *Emphasis added.* As noted above Kawabe teaches a computer having a cable-winding device and a pointing device electrically connected to the computer via a cable. As noted above Yong teaches a tracking device (i.e. the ball 310 and encoders (not shown)) disposed within body 300 of the pointing device and a reel assembly 314 having a frame or housing 318 separating reel assembly 314 from the tracking device. As noted above Moore teaches a mechanical transmission system having a base with an electronic interface fixed to the base and a position sensor that reads the position of the rotatable wheel using a rotary sensor that senses the rotation of a shaft relative to a fixed base having one or more components on the fixed base. Although Moore teaches using a photodiode and photodetector to detect rotation even assuming for the moment that Moore does teach a tracking device, Moore teaches a tracking device that has one component rotating (i.e. the wheel shaft) and another component fixed with respect to the rotating component. Moore does not disclose, teach, or suggest, a rotatable control circuit having at least one transducer disposed on the cable receiver converting movement of the mechanical motion transfer mechanism into position signals in response to movement of the housing," (i.e.

neither Kawabe, Yong, nor Moore disclose, teach, or suggest a pointing device having an optomechanical tracking device that has a mechanical motion transfer mechanism (i.e. ball and rotary encoders) and at least one transducer (i.e. LED or photodetector) disposed on the rotatable cable receiver (i.e. cable receiver rotates when the cable is wound or unwound from the cable receiver, the tracking device moves or rotates when the housing is moved across a surface). That is both Yong and Moore teach where at least one component is fixed relative to the component that is in motion, whereas the instant specification teaches where at least one transducer is on the cable receiver which in turn is rotatable. Since Kawabe, Yong, and Moore are silent on "a rotatable control circuit having at least one transducer disposed on the cable receiver converting movement of the mechanical motion transfer mechanism into position signals in response to movement of the housing," the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in independent claim 26. *Emphasis added.*

Thus Examiner's suggested combination does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection has been overcome. The cited prior art does not suggest the desirability of the claimed invention; a reasonable expectation of success in adapting the prior art to function in the manner of the present invention is absent; and all the claim limitations are not taught nor suggested by the prior art. The applicants therefore respectfully request that the rejection under 35 U.S.C. §103(a) for independent claim 26 be withdrawn.

In regards to independent claim 33, none of the cited references Kawabe, Yong, or Moore disclose, teach, or suggest, "a tracking device mounted to the cable receiver, the tracking device having an optical sensor for generating signals based on movement of the pointing device," as it is disclosed, defined, and claimed in independent claim 33 by the Applicants in the instant specification and has already been argued for independent claim 25 above. *Emphasis added.*

Further, in regards to independent claim 34, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest, " a tracking device mounted to the cable receiver, comprising: a rotatable control circuit mounted to the cable receiver for producing position signals in response to movement of the housing," as it is disclosed, defined, and claimed in independent claim 34 by the Applicants in the instant specification and has already been argued for independent claim 24 above. *Emphasis added.*

More importantly in regards to independent claims 33 and 34, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest:

- "a switch capacitively coupled to the cable receiver wherein the switch generates a pointing signal to the display [see Figs. 4a and 4c in instant specification];"
- "a detent wherein the detent aligns the cable receiver to the housing [see Figs. 4c-4f in instant specification];"
- "a connector receiver formed in the housing which accepts the connector [see Figs. 4a and 5a in instant specification];"

as it is disclosed, defined, and claimed in independent claims 33 and 34 by the Applicants in the instant specification. Further, the instant specification discloses, defines, and independent claim 33 claims,

- "a lid, wherein the lid is disposed in an open position when the cable is being wound around the cable receiver, and the lid is disposed in a closed position when covering the cable receiver [see 364 and 344 Fig. 4c in instant specification];"
- "a rotatable disk affixed to the cable receiver, the rotatable disk having a disk top including an exterior surface further comprising:
 - a depression formed in the exterior surface of the disk top, the depression having a diameter, and
 - an aperture within the depression less than the diameter of the depression [see Fig. 4a in instant specification];"

which Applicants have been unable to find any teaching, suggestion, or disclosure of in either Kawabe, Yong, or Moore. That is Kawabe, Yong, and

Moore are silent on all of these claimed limitations. Further, the instant specification discloses, defines, and independent claim 34 claims,

- "a rotatable disk affixed to the cable receiver, and disposed within the opening in the cover [see Fig. 5d in instant specification];"
- "a tracking mechanism disposed in the housing . . . comprising: a first wheel having a polygonal edge surface [see Fig. 6d in instant specification];"
- a rotatable control circuit mounted to the cable receiver for producing position signals in response to movement of the housing, the rotatable control circuit having first and second transducers for receiving user commands indicating movement of the housing and producing first and second position signals in response thereto [see Fig. 6a in instant specification];"

which Applicants have been unable to find any teaching, suggestion, or disclosure of in either Kawabe, Yong, or Moore. That is Kawabe, Yong, and Moore are silent on all of these claimed limitations. Since Kawabe, Yong, and Moore are silent on all of these limitations the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach, suggest, or disclose the present invention as recited in independent claims 33 and 34, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection has been overcome. The cited prior art does not suggest the desirability of the claimed invention; a reasonable expectation of success in adapting the prior art to function in the manner of the present invention is absent; and all the claim limitations are not taught nor suggested by the prior art. The applicants therefore respectfully request that the rejections under 35 U.S.C. §103(a) be withdrawn for independent claims 33 and 34.

In regards to independent claim 27, as noted for independent claim 33 none of the cited references Kawabe, Yong, or Moore, disclose, teach, or

suggest, a lid disposed in either an open or closed position. In addition, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest, "[a] method for storing a cable . . . comprising the steps of: . . . opening a lid disposed on the housing of the pointing device; providing access to a rotatable disk attached to the cable receiver; rotating the rotatable disk to wind the cable around the cable receiver; inserting the connector into the connector receiver, and closing the lid," as it is disclosed, defined, and claimed in independent claim 27 by the Applicants in the instant specification. *Emphasis added.* Since Kawabe, Yong, and Moore are silent on all of these limitations and in particular all are silent on a pointing device having a lid, the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in independent claim 27, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection has been overcome. The cited prior art does not suggest the desirability of the claimed invention; a reasonable expectation of success in adapting the prior art to function in the manner of the present invention is absent; and all the claim limitations are not taught nor suggested by the prior art. The applicants therefore respectfully request that the rejections under 35 U.S.C. §103(a) be withdrawn for independent claim 27.

In regards to the dependent claims, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. MPEP 2143.03. In regards to dependent claims 2-4, 9-14, 16, 18-20, and 28-32 dependent claims 2-4, 9-14, 16, 18-20, and 29-32 are dependent upon independent claim 1, and dependent claim 28 is dependent upon independent claim 27 thus, dependent claims 2-4, 9-14, 16, 18-20, and 29-32 are therefore believed to be allowable as dependent upon a believed allowable claim. Accordingly, the Applicants assert that the rejection of dependent claims 2-4, 9-14, 16, 18-20, and 28-32 has been overcome. The applicants therefore respectfully request that the rejections under 35 U.S.C. §103(a) be withdrawn for dependent claims 2-4, 9-14, 16, 18-20, and 28-32.

As noted above dependent claim 4 is believed allowable as dependent upon a believed allowable independent claim. Further, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest, "[a] switch [including] a link having a conductor portion capacitively coupled to the cable receiver," as it is disclosed, defined, and claimed in dependent claim 4 by the Applicants in the instant specification. *Emphasis added.* In addition, Applicants respectfully disagree with Examiner's statement at the bottom of page 3, "[r]egarding claims 3-4 Yong teaches a keyboard (412) and mouse and [sic] (414) for entering information" Although Yong teaches using a switch to enter information none of the cited references Kawabe, Yong, or Moore disclose, teach, or suggest, "[a] switch [including] a link having a conductor portion capacitively coupled to the cable receiver." Since Kawabe, Yong, and Moore are all silent on "a conductor portion capacitively coupled to the cable receiver," the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in dependent claim 4, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection of dependent claim 4 has been overcome and respectfully request that the rejection under 35 U.S.C. §103(a) be withdrawn for dependent claim 4.

As noted above dependent claim 9 is believed allowable as dependent upon a believed allowable independent claim. Further, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest "wherein the tracking device further comprises an optical tracking device including a sensor, a lens, and a light source, wherein the optical tracking device optically tracks movement of the pointing device," as it is disclosed, defined, and claimed in dependent claim 9 by the Applicants in the instant specification. *Emphasis added.* In addition, Applicants respectfully disagree with Examiner's statement top of page 4 "[r]egarding claims 9 . . . Yong teaches an auxiliary memory (126) which includes optical device" The optical storage device taught in Yong is not an optical tracking device as disclosed, defined and claimed in the instant specification. Since Kawabe, Yong, and Moore are silent on "an optical tracking

device including a sensor, a lens, and a light source," the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in dependent claim 9, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection of dependent claim 9 has been overcome, and respectfully request that the rejection under 35 U.S.C. §103(a) be withdrawn for dependent claim 9.

As noted above dependent claim 10 is believed allowable as dependent upon a believed allowable independent claim. Further, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest "a *reference stop surface disposed in the housing*; and a *detent disposed in the housing*; the detent having a mating surface to the reference stop surface, wherein when the detent mates with the reference stop surface, providing tactile feedback, the tracking device is in proper alignment with the housing, and when the detent does not mate with the reference stop surface the tracking device is not in proper alignment with the housing," as it is disclosed, defined, and claimed in dependent claim 10 by the Applicants in the instant specification. *Emphasis added.* Applicants agree that Yong teaches electric encoders sensing the rotation of the ball (Col. 1, lines 28-31 speak only to background material describing in general optomechanical tracking devices with no detail provided), however, Applicants respectfully disagree with Examiner's statement bottom of page 3 that such encoders disclose, teach, or suggest, "wherein when the detent mates with the reference stop surface, providing tactile feedback, the tracking device is in proper alignment with the housing." That is Yong does not teach, suggest, or disclose a pointing device having a reference stop and detent. Since Kawabe, Yong, and Moore are silent on "wherein when the detent mates with the reference stop surface, providing tactile feedback, the tracking device is in proper alignment with the housing" the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in dependent claim 10, and thus does not meet any of the three basic criteria that must be met to establish a

prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection of dependent claim 10 has been overcome, and respectfully request that the rejection under 35 U.S.C. §103(a) be withdrawn for dependent claim 10.

As noted above dependent claim 29 is believed allowable as dependent upon a believed allowable independent claim. In addition, claim 29 is dependent upon dependent claim 10 that is also believed to be an allowable dependent claim. Further, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest "wherein said *detent further comprises an electrical switch*," as it is disclosed, defined, and claimed in dependent claim 29 by the Applicants in the instant specification. *Emphasis added.* Applicants respectfully disagree with Examiner's statement in middle of page 4 stating "Kawabe teaches a pointing device whose upper surface is provided with a sensor pad (40a)," teaches, suggests, or discloses "wherein said detent further comprises an electrical switch." As noted above Yong does not teach, suggest, or disclose a pointing device having a reference stop and detent. Since Kawabe, Yong, and Moore are silent on "wherein said detent further comprises an electrical switch," the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in dependent claim 29, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection of dependent claim 29 has been overcome, and respectfully request that the rejection under 35 U.S.C. §103(a) be withdrawn for dependent claim 29.

As noted above dependent claim 12 is believed allowable as dependent upon a believed allowable independent claim. Further, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest, "a lid having an open position providing access to the cable receiver and the lid having a closed position covering the cable receiver," as it is disclosed, defined, and claimed in dependent claim 12 by the Applicants in the instant specification. *Emphasis added.* Applicants respectfully disagree with Examiner's statement

top of page 4 stating "[r]egarding claims 12 . . . a cord (204) with fully extended length shown as phantom lines" teaches, suggests, or discloses "a lid having an open position." As noted above in independent claim 33 Kawabe, Yong, and Moore are silent on a lid and thus are also silent on "a lid having an open position providing access to the cable receiver and the lid having a closed position covering the cable receiver," the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in dependent claim 12, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection of dependent claim 12 has been overcome, and respectfully request that the rejection under 35 U.S.C. §103(a) be withdrawn for dependent claim 12.

As noted above dependent claim 13 is believed allowable as dependent upon a believed allowable independent claim. Further, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest, "a rotatable disk affixed to the cable receiver, the rotatable disk having a disk top including an exterior surface, further comprising: a depression formed in the exterior surface of the disk top, the depression having a diameter, and adapted to accept a finger, and an aperture within the depression less than the diameter of the depression," as it is disclosed, defined, and claimed in dependent claim 13 by the Applicants in the instant specification. *Emphasis added.* Applicants respectfully disagree with Examiner's statement top of page 4 "[r]egarding claims . . . 13 . . . Yong teaches an auxiliary memory (126) which includes optical device and different types of disks. . . ." An optical device and different types of disks in Yong refers to storage devices and does not teach or suggest "a rotatable disk affixed to the cable receiver," as it is disclosed, defined and claimed in the instant specification. As noted above in independent claim 33 Kawabe, Yong, and Moore are silent on "a rotatable disk affixed to the cable receiver," the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in dependent claim 13, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under

MPEP §2143. Accordingly, the Applicants assert that the rejection of dependent claim 13 has been overcome, and respectfully request that the rejection under 35 U.S.C. §103(a) be withdrawn for dependent claim 13.

As noted above dependent claim 14 is believed allowable as dependent upon a believed allowable independent claim. Further, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest, "*a connector receiver formed in the housing which accepts the connector,*" as it is disclosed, defined, and claimed in dependent claim 14 by the Applicants in the instant specification. *Emphasis added.* Applicants respectfully disagree with Examiner's statement top of page 4, "[r]egarding claims . . . 14 Kawabe teaches the use of cable means for a pointing device." Although Kawabe does teach a cable means Kawabe is silent on a connector receiver in the pointing device housing. As noted above in independent claims 33 and 34 Kawabe, Yong, and Moore are silent on "a connector receiver formed in the housing which accepts the connector," the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in dependent claim 14, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection of dependent claim 14 has been overcome, and respectfully request that the rejection under 35 U.S.C. §103(a) be withdrawn for dependent claim 14.

As noted above dependent claim 16 is believed allowable as dependent upon a believed allowable independent claim. Further, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest, "*a mechanical motion transfer mechanism disposed in the housing; and a rotatable control circuit having at least one transducer disposed on or within the cable receiver,* and converting movement of the mechanical motion transfer mechanism into position signals in response to movement of the housing," as it is disclosed, defined, and claimed in dependent claim 16 by the Applicants in the instant specification. *Emphasis added.* Applicants agree that Yong teaches electric encoders sensing the rotation of the ball (Col. 1, lines 28-31 speak only to

background material describing in general optomechanical tracking devices with no detail provided),), however, Applicants respectfully disagree with Examiner's statement bottom of page 3 that such encoders disclose, teach, or suggest "a rotatable control circuit having at least one transducer disposed on the cable receiver converting movement of the mechanical motion transfer mechanism into position signals in response to movement of the housing." As noted above in independent claims 26 Kawabe, Yong, and Moore are silent on "a rotatable control circuit having at least one transducer disposed on the cable receiver converting movement of the mechanical motion transfer mechanism into position signals in response to movement of the housing," the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in dependent claim 16, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection of dependent claim 16 has been overcome, and respectfully request that the rejection under 35 U.S.C. §103(a) be withdrawn for dependent claim 16.

As noted above dependent claim 18 is believed allowable as dependent upon a believed allowable independent claim. In addition dependent claim 18 is dependent upon dependent 16 argued above. Further, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest, "wherein the rotatable control circuit further *comprises first and second transducers converting movement of the mechanical motion transfer mechanism* into first and second position signals in response thereto," as it is disclosed, defined, and claimed in dependent claim 18 by the Applicants in the instant specification. *Emphasis added.* Applicants respectfully disagree with Examiner's statement top of page 4 "[r]egarding claims . . . 18, Yong teaches an auxiliary memory (126) which includes optical device and different types of disks. . . ." An optical device and different types of disks in Yong refers to storage devices and does not teach or suggest, a "rotatable control circuit further comprising first and second transducers converting movement of the mechanical motion transfer mechanism," as it is disclosed, defined and claimed in the instant specification.

As noted above in independent claim 34 Kawabe, Yong, and Moore are silent on "wherein the rotatable control circuit further comprises first and second transducers converting movement of the mechanical motion transfer mechanism into first and second position signals in response thereto" the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in dependent claim 18, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection of dependent claim 18 has been overcome, and respectfully request that the rejection under 35 U.S.C. §103(a) be withdrawn for dependent claim 18.

As noted above dependent claim 19 is believed allowable as dependent upon a believed allowable independent claim. In addition dependent claim 19 is dependent upon dependent claim 18 that in turn is dependent on dependent claim 16 both argued above. Further, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest, "wherein the mechanical motion transfer mechanism further comprises: a first wheel with a polygonal edge surface rotatably mounted relative to the housing; and a second wheel rotatably mounted relative to the housing," as it is disclosed, defined, and claimed in dependent claim 19 by the Applicants in the instant specification. *Emphasis added.* Applicants respectfully disagree with Examiner's statement top of page 4 stating "[r]egarding claims 12 . . . a cord (204) with fully extended length shown as phantom lines" teaches, suggests or discloses "a first wheel with a polygonal edge surface rotatably mounted relative to the housing." As noted above in independent claim 34 Kawabe, Yong, and Moore are silent on "a first wheel with a polygonal edge surface rotatably mounted relative to the housing," the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in dependent claim 19, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection of dependent claim 19 has

been overcome, and respectfully request that the rejection under 35 U.S.C. §103(a) be withdrawn for dependent claim 19.

As noted above dependent claim 30 is believed allowable as dependent upon a believed allowable independent claim. In addition, claim 30 is dependent upon dependent claim 19 that is dependent upon dependent claim 18 that is dependent upon claim 16 where 16, 18, and 19 are believed to be an allowable dependent claims. Further, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest, "wherein the polygonal edge surface further comprises n flat reflective surfaces, wherein n is greater than 20," as it is disclosed, defined, and claimed in dependent claim 29 by the Applicants in the instant specification. *Emphasis added.* Applicants respectfully disagree with Examiner's statement in the middle of page 4 stating "Kawabe teaches a pointing device whose upper surface is provided with a sensor pad (40a)," teaches, suggests, or discloses "wherein the polygonal edge surface further comprises n flat reflective surfaces." As noted above for dependent claim 19 Yong does not teach, suggest, or disclose a pointing device a first wheel with a polygonal edge surface rotatably mounted relative to the housing. And since Kawabe, Yong, and Moore are silent on "wherein the polygonal edge surface further comprises n flat reflective surfaces" the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in dependent claim 30, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection of dependent claim 30 has been overcome, and respectfully request that the rejection under 35 U.S.C. §103(a) be withdrawn for dependent claim 19.

As noted above dependent claim 31 is believed allowable as dependent upon a believed allowable independent claim. In addition, claim 31 is dependent upon dependent claim 19 that is dependent upon dependent claim 18 that is dependent upon claim 16 where 16, 18, and 19 are believed to be an allowable dependent claims. Further, none of the cited references Kawabe,

Yong, or Moore, disclose, teach, or suggest, "wherein the second wheel further comprises an encoder wheel having alternating reflective and non-reflective surfaces on a face surface of the encoder wheel," as it is disclosed, defined, and claimed in dependent claim 31 by the Applicants in the instant specification. *Emphasis added.* Yong teaches, "[a] wheel assembly 212 may be positioned on the upper surface of the body 208 adjacent to the keys 210. The wheel assembly 212 preferably comprises a wheel, extending above the upper surface of the body 208, which may be both rotated and depressed by a user.", Col. 5, lines 4-9. The wheel assembly in Yong does not teach, suggest, or disclose an encoder wheel having alternating reflective and non-reflective surfaces on a face surface as disclosed, defined and claimed in the instant specification. As noted above for dependent claim 19 Yong does not teach, suggest, or disclose a pointing device having a first wheel with a polygonal edge surface rotatably mounted relative to the housing. And since Kawabe, Yong, and Moore are silent on "wherein the second wheel further comprises an encoder wheel having alternating reflective and non-reflective surfaces on a face surface of the encoder wheel," the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in dependent claim 31, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection of dependent claim 31 has been overcome, and respectfully request that the rejection under 35 U.S.C. §103(a) be withdrawn for dependent claim 31.

As noted above dependent claim 32 is believed allowable as dependent upon a believed allowable independent claim. In addition claim 32 is dependent upon dependent claim 19 that is dependent upon dependent claim 18 that is dependent upon claim 16 where 16, 18, and 19 are believed to be an allowable dependent claims. Further, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest, "wherein the first wheel operably couples to the first transducer utilizing reflected light and the second wheel operably couples to the second transducer utilizing reflected light," as it is disclosed, defined, and claimed in dependent claim 32 by the Applicants in the instant

specification. *Emphasis added.* . Yong teaches, "[a] wheel assembly 212 may be positioned on the upper surface of the body 208 adjacent to the keys 210. The wheel assembly 212 preferably comprises a wheel, extending above the upper surface of the body 208, which may be both rotated and depressed by a user." Col. 5, lines 4-9. Applicants respectfully disagree with Examiner's statement in the middle of page 4 "[r]egarding claims 31-32, Yong teaches an input device including a wheel assembly (212)." The wheel assembly in Yong does not teach, suggest, or disclose "wherein the first wheel operably couples to the first transducer utilizing reflected light," as disclosed, defined and claimed in the instant specification. As noted above for dependent claims 19 and 31 Yong does not teach, suggest, or disclose a pointing device wherein the mechanical motion transfer mechanism further comprises: a first wheel with a polygonal edge surface rotatably mounted relative to the housing. And since Kawabe, Yong, and Moore are silent on "wherein the first wheel operably couples to the first transducer utilizing reflected light and the second wheel operably couples to the second transducer utilizing reflected light," the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in dependent claim 32, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection of dependent claim 32 has been overcome, and respectfully request that the rejection under 35 U.S.C. §103(a) be withdrawn for dependent claim 32.

As noted above dependent claim 20 is believed allowable as dependent upon a believed allowable independent claim. Further, none of the cited references Kawabe, Yong, or Moore, disclose, teach, or suggest, "*a rotatable disk mounted to the cable receiver; and a slot in the housing, wherein the rotatable disk protrudes through the slot,*" as it is disclosed, defined, and claimed in dependent claim 20 by the Applicants in the instant specification. *Emphasis added.* Applicants assume that Examiner's reference to (350) in Fig. 3a is in reference to Fig. 3b where Yong discloses,

"the stop mechanism 326 may alternatively comprise a disk 350 having a plurality of notches 352 spaced about it[s] periphery. A flexible pawl 354 may engage a notch 352 of the disk 350 Preferably, the disk is affixed to the shaft so that its center is coincident with the center of the spool 322 wherein the disk may turn in concert with the spool as the spool 322 is rotated by spring 342."

Col. 6, lines 56-65. Yong is silent on "a rotatable disk mounted to the cable receiver; and a slot in the housing, wherein the rotatable disk protrudes through the slot," as it is disclosed, defined, and claimed in dependent claim 20 by the Applicants in the instant specification. As noted above in independent claim 34 Kawabe, Yong, and Moore are silent on "a rotatable disk mounted to the cable receiver . . . wherein the rotatable disk protrudes through the slot," the Examiner's suggested combination (which may or may not be proper) of Kawabe, Yong, and Moore does not teach the present invention as recited in dependent claim 20, and thus does not meet any of the three basic criteria that must be met to establish a prima facie case of obviousness under MPEP §2143. Accordingly, the Applicants assert that the rejection of dependent claim 20 has been overcome, and respectfully request that the rejection under 35 U.S.C. §103(a) be withdrawn for dependent claim 20.

Therefore, in view of the foregoing Amendment and Remarks, Applicants believe the present application to be in a condition suitable for allowance. Examiner is respectfully urged to withdraw the rejections, reconsider the present Application in light of the foregoing Amendment, and pass the amended Application to allowance.


If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is respectfully requested to call applicants' representative at (541) 715-1694 to discuss the steps necessary for placing the application in condition for allowance.

Favorable action by the Examiner is solicited.

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Respectfully submitted,
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